

Listing of the Claims

1. (Currently Amended) X-ray detector (10) with detector elements (1, 11) arranged in a layer, wherein every detector element (1, 11) comprises a sensor unit (5) and a processing circuit (4) coupled thereto, and wherein a shielding (3, 13) of variable shielding effectiveness is disposed in front of the processing circuit (4).
2. (Currently Amended) X-ray detector (10) according to claim 1, characterized in that wherein the shielding (3, 13) has a variable effective thickness (d1, d2).
3. (Currently Amended) X-ray detector according to claim 1, characterized in that wherein a scintillator unit (2, 12) is disposed in front of each sensor unit (5).
4. (Currently Amended) X-ray detector according to claim 3, characterized in that wherein the scintillator unit (2, 12) and the shielding (3, 13) are arranged in a gapless way in a common layer.
5. (Currently Amended) X-ray detector according to claim 2, characterized in that wherein the shielding is formed as a section (3, 13).
6. (Currently Amended) X-ray detector according to claim 5, characterized in that wherein the section ~~consists of~~ comprises a spatially shaped strip (3).
7. (Currently Amended) X-ray detector according to claim 5, characterized in that wherein the section (3) is L-shaped.
8. (Currently Amended) X-ray detector according to claim 5, characterized in that wherein the section (13) is trapezoidal or triangular.
9. (Currently Amended) X-ray detector according to claim 1, characterized in that wherein material of the shielding (3, 13) contains at least one of the following substances: Pb, W, Mo, Ta, Ti, BaSO₄, BaCO₃, BaO, PbCO₃, PbCl₂, PbSO₄, TiO₂ and/or ZnO.

10. (Currently Amended) X-ray detector according to claim 9, ~~characterized in that~~
wherein said material is embedded in a ~~carrier, preferably an epoxy-resin carrier.~~

11. (Currently Amended) X-ray detector according to claim 1, ~~characterized in that~~
wherein the sensor units ~~(5)~~ and the processing circuits ~~(4)~~ are arranged in a common layer.

12. (Currently Amended) X-ray detector ~~(10)~~ with detector elements ~~(1, 11)~~ arranged
in a layer, ~~preferably X-ray detector according to claim 1,~~ comprising a layer of scintillator
units ~~(2, 12)~~ disposed in front of a layer of sensor units ~~(5)~~, the scintillator units ~~(2, 12)~~
being separated from each other by a shielding ~~(3, 13)~~ that has a high shielding
effectiveness with respect to X-rays and a high reflectivity with respect to photons
produced in the scintillator units ~~(2, 12)~~.